

Orbital Data Explorer

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Orbital Data Explorer (ODE)

Mars Orbital Data Explorer
PDS Geosciences Node
Washington University in St. Louis

Home Data Product Search Tools Data Set Browser Download Help & Resources

DATA PRODUCT SEARCH Reset Form

Planetary science data stored in PDS is organized by [data products](#) and [data sets](#). A data set is a collection of related data products, usually products acquired by a particular instrument and processed in a certain way. The data set also includes all documentation and supporting materials needed to understand and use the data products. A data product is a set of measurements resulting from a science observation, usually products acquired by a particular instrument and processed in a certain way.

STEP 1. SELECT DATA SETS TO SEARCH (A SELECTION IS REQUIRED)

Select One or More Desired Data Sets (Show Options - 4 Parameters Set)

STEP 2. SET ADDITIONAL FILTERING PARAMETERS (OPTIONAL)

Select a Product ID or filter by a partial Product ID (Show Options - 0 Parameters Set)

Find by Product Center Latitude / Longitude (Show Options - 4 Parameters Set)

Filter by Time Range (Show Options - 0 Parameters Set)

STEP 3. PREVIEW SEARCH RESULTS SUMMARY (OPTIONAL)

STEP 4. SUBMIT QUERY

Display Product Thumbnails on search results page

SEARCH for Products

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SEARCH RESULTS Output Re

Products Found: 76
 Display Product Thumbnails

Instrument	Type	Product ID
MRO CRISM DDR		FRTO000319Z
MRO CRISM DDR		FRTO000319Z
MRO CRISM TRDR		FRTO000319Z
MRO CRISM TRDR		FRTO000319Z
MRO CRISM TRDR		FRTO000319Z
MRO CRISM DDR		FRTO000350Q
MRO CRISM DDR		FRTO000350Q
MRO CRISM TRDR		FRTO000350Q
MRO CRISM TRDR		FRTO000350Q
MRO CRISM TRDR		FRTO000350Q
MRO CRISM DDR		FRTO000553B
MRO CRISM DDR		FRTO000553B
MRO CRISM TRDR		FRTO000553B
MRO CRISM TRDR		FRTO000553B
MRO CRISM TRDR		FRTO000553B
MRO CRISM DDR		FRTO00070F1
MRO CRISM DDR		FRTO00070F1
MRO CRISM TRDR		FRTO00070F1
MRO CRISM TRDR		FRTO00070F1
MRO CRISM TRDR		FRTO000812F
MRO CRISM DDR		FRTO000812F
MRO CRISM TRDR		FRTO000812F
MRO CRISM TRDR		FRTO000812F
MRO CRISM TRDR		FRTO000812F
MRO CRISM DDR		FRTO0008CE1
MRO CRISM DDR		FRTO0008CE1
MRO CRISM TRDR		FRTO0008CE1

FRTO000812F_07_IF164S_TRR2

[More About this Product Type \(help page\)](#)
[Data Product Software Interface Specification \(PDF\)](#)
[Archive Software Interface Specification Document \(PDF\)](#)

Browse Image - the image below is not the actual data product

CRISM Instrument Team Web Site
[FRTO000812F_07_IF164S_TRR2](#)

PDS Product Files

Product Files & Labels
frto000812f_07_if164s_trr2.img 115,049 KB
Product Data File

RETRIEVE and View Products

MAP Products

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MAP SEARCH - Mars Cylindrical Projection
[View Users' Data Set Files...](#)

Select Products By Area

Map Controls

Product Query Results
 Product Query Lat/Lon Bounding Box
 Product Query Polygon
 Grid Lines

Data Set Files Selected

View In Table	Area	Selected Products
Product Type	Area	Selected Products
MRO CRISM DDR	15879	0

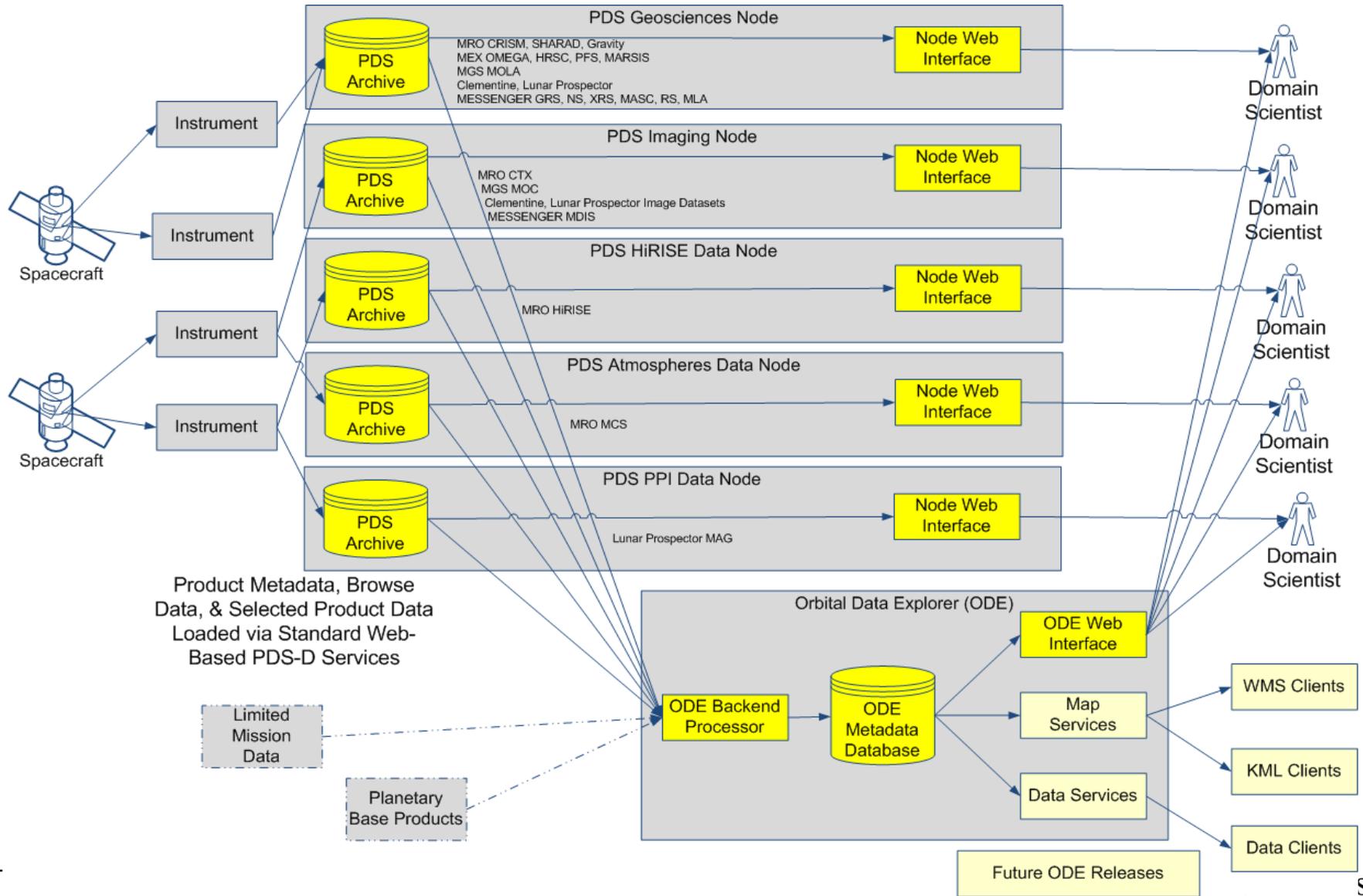
Map Tool Reference Panel

name	Icon	Description
Zoom in		Click and drag a rectangle: Click and hold the left mouse button down on the map at one corner of the rectangle to zoom in. Drag the mouse to the other corner of the rectangle, and release the mouse button. The map will zoom in to the area of the rectangle.
Zoom out		Click and drag a rectangle: the map will zoom out so that the current map area will fit into the rectangle drawn. To cancel the rectangle this way, the more the map will zoom out.
Pan (movement)		Click and drag the map: Click and hold the left mouse button on the map, and drag the map. The map will be re-centered, with the location dragged at the location you dropped it.
Full extent		Full extent: Immediately zooms the map out to the area of all features...

Mars Orbital Data Explorer (ODE)

- ❑ Specialized PDS web tool
- ❑ Allows users to:
 - search, retrieve, and order PDS products
 - search across missions and instruments
 - search across PDS nodes
 - search via maps and forms
- ❑ Current version supports PDS-Compliant archives from:
 - Mars Reconnaissance Orbiter (MRO)
 - ❑ CRISM, HiRISE, SHARAD, Gravity, MCS, and CTX
 - Mars Express
 - ❑ HRSC, OMEGA, PFS, MARSIS
 - Mars Global Surveyor
 - ❑ MOC, MOLA

ODE and PDS Nodes



ODE Approach – Web Interface

- Dynamic forms-based **product** query including:
 - Instrument / Product Type
 - Space and Time
 - Coordinated Target Observations
 - Ad-hoc cross-instrument searches
 - Product-specific searches
- Map-based query
- Browse versions of products
- Direct access to product-specific web interfaces
 - Example: HiRISE JPIP Servers or CRISM Team Site
- Download selected products in “on-the-fly mini-archives”

How does ODE relate to CRISM Web Site?

ODE

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PDS Geosciences Node
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SEARCH RESULTS
Products Found: 36,177

Instrument Type	Product ID	Date Time
MRO CRISM COC	15T0002782_07_DE167L_COE1	2006-09-27T17:15:24.199
MRO CRISM COC	15T0002782_07_DE167S_COE1	2006-09-27T17:15:24.199
MRO CRISM TRDR	15T0002782_07_SF167L_TR1	2006-09-27T17:15:24.199
MRO CRISM TRDR	15T0002782_07_SF167S_TR1	2006-09-27T17:15:24.199
MRO CRISM COC	15T0002782_07_DE168L_COE1	2006-09-29T15:14:36.036
MRO CRISM COC	15T0002782_07_DE168S_COE1	2006-09-29T15:14:36.036
MRO CRISM TRDR	15T0002782_07_SF168L_TR1	2006-09-29T15:14:36.036
MRO CRISM TRDR	15T0002782_07_SF168S_TR1	2006-09-29T15:14:36.036
MRO CRISM COC	15T0002782_07_DE169L_COE1	2006-09-29T15:14:36.036
MRO CRISM COC	15T0002782_07_DE169S_COE1	2006-09-29T15:14:36.036
MRO CRISM TRDR	15T0002782_07_SF169L_TR1	2006-09-29T15:14:36.036
MRO CRISM TRDR	15T0002782_07_SF169S_TR1	2006-09-29T15:14:36.036
MRO CRISM COC	15T0002782_07_DE170L_COE1	2006-09-29T15:14:36.036
MRO CRISM COC	15T0002782_07_DE170S_COE1	2006-09-29T15:14:36.036
MRO CRISM TRDR	15T0002782_07_SF170L_TR1	2006-09-29T15:14:36.036
MRO CRISM TRDR	15T0002782_07_SF170S_TR1	2006-09-29T15:14:36.036
MRO CRISM COC	15T0002782_07_DE171L_COE1	2006-09-29T15:14:36.036
MRO CRISM COC	15T0002782_07_DE171S_COE1	2006-09-29T15:14:36.036
MRO CRISM TRDR	15T0002782_07_SF171L_TR1	2006-09-29T15:14:36.036
MRO CRISM TRDR	15T0002782_07_SF171S_TR1	2006-09-29T15:14:36.036
MRO CRISM COC	15T0002782_07_DE172L_COE1	2006-10-01T09:52:28.742
MRO CRISM COC	15T0002782_07_DE172S_COE1	2006-10-01T09:52:28.742
MRO CRISM TRDR	15T0002782_07_SF172L_TR1	2006-10-01T09:52:28.742
MRO CRISM TRDR	15T0002782_07_SF172S_TR1	2006-10-01T09:52:28.742
MRO CRISM COC	15T0002782_07_DE173L_COE1	2006-10-01T09:52:28.742
MRO CRISM COC	15T0002782_07_DE173S_COE1	2006-10-01T09:52:28.742
MRO CRISM TRDR	15T0002782_07_SF173L_TR1	2006-10-01T09:52:28.742
MRO CRISM TRDR	15T0002782_07_SF173S_TR1	2006-10-01T09:52:28.742

115,049

CRISM Web Site

CRISM DATA PRODUCTS
Display Features of World

115,049

Bi-Directional Links

□ Focus on CRISM

- Search across missions
- Example: across CRISM, HiRISE, CTX

How does ODE relate to Google Earth (Mars)?

Mars Orbital Data Explorer

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SEARCH RESULTS

Products Found: 30,177

Instrument	Type	Product ID	Urb. Time
MRO CRISM	DCR	1000002782.07.SP164L.DCR1	2006-09-27T17:15:04.199
MRO CRISM	DCR	1000002782.07.SP164L.DCR1	2006-09-27T17:15:04.199
MRO CRISM	TRDR	1000002782.07.SP164L.THR2	2006-09-27T17:15:04.199
MRO CRISM	TRDR	1000002782.07.SP164L.THR2	2006-09-27T17:15:04.199
MRO CRISM	DCR	1000002782.07.SP164L.DCR1	2006-09-29T15:16:35.903
MRO CRISM	DCR	1000002782.07.SP164L.DCR1	2006-09-29T15:16:35.903
MRO CRISM	TRDR	1000002782.07.SP164L.THR2	2006-09-29T15:16:35.903
MRO CRISM	TRDR	1000002782.07.SP164L.THR2	2006-09-29T15:16:35.903
MRO CRISM	DCR	1000002782.07.SP164L.DCR1	2006-09-29T15:16:35.903
MRO CRISM	DCR	1000002782.07.SP164L.DCR1	2006-09-29T15:16:35.903
MRO CRISM	TRDR	1000002782.07.SP164L.THR2	2006-09-29T15:16:35.903
MRO CRISM	TRDR	1000002782.07.SP164L.THR2	2006-09-29T15:16:35.903
MRO CRISM	DCR	1000002782.07.SP164L.DCR1	2006-09-29T15:16:35.903
MRO CRISM	DCR	1000002782.07.SP164L.DCR1	2006-09-29T15:16:35.903
MRO CRISM	TRDR	1000002782.07.SP164L.THR2	2006-09-29T15:16:35.903
MRO CRISM	TRDR	1000002782.07.SP164L.THR2	2006-09-29T15:16:35.903
MRO CRISM	DCR	1000002782.07.SP164L.DCR1	2006-09-29T15:16:35.903
MRO CRISM	DCR	1000002782.07.SP164L.DCR1	2006-09-29T15:16:35.903
MRO CRISM	TRDR	1000002782.07.SP164L.THR2	2006-09-29T15:16:35.903
MRO CRISM	TRDR	1000002782.07.SP164L.THR2	2006-09-29T15:16:35.903
MRO CRISM	DCR	1000002782.07.SP164L.DCR1	2006-09-29T15:16:35.903
MRO CRISM	DCR	1000002782.07.SP164L.DCR1	2006-09-29T15:16:35.903
MRO CRISM	TRDR	1000002782.07.SP164L.THR2	2006-09-29T15:16:35.903
MRO CRISM	TRDR	1000002782.07.SP164L.THR2	2006-09-29T15:16:35.903
MRO CRISM	DCR	1000002782.07.SP164L.DCR1	2006-09-29T15:16:35.903
MRO CRISM	DCR	1000002782.07.SP164L.DCR1	2006-09-29T15:16:35.903
MRO CRISM	TRDR	1000002782.07.SP164L.THR2	2006-09-29T15:16:35.903
MRO CRISM	TRDR	1000002782.07.SP164L.THR2	2006-09-29T15:16:35.903

Derived Files

ftp://pds0141.jpl.nasa.gov/pds0141/1000002782.07.SP164L.THR2

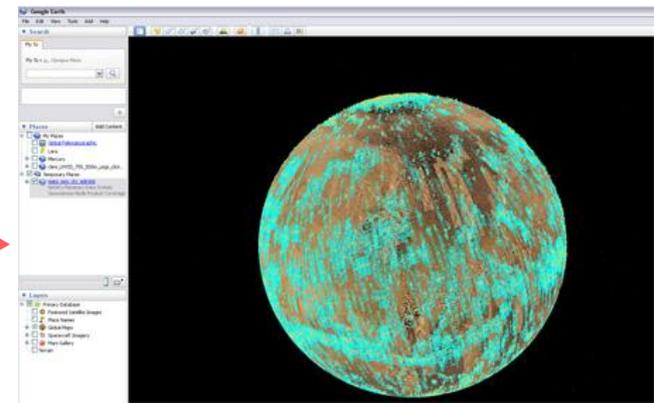
Product KML File

Footprints Link back to ODE Product Results Page



Individual Product KML Link from ODE Product Results

Product Type Coverage KML File Generated by ODE to Google Mars



Meridiani Opportunity Site

- Use ODE to acquire science data products
- Meridiani Location:
 - Latitude Range: 4S to 1.5S
 - Longitude Range: 6.5W to 4.5W
 - (353.5E to 355.5E)

Meridiani and ODE - 1

Open ODE Mars: <http://ode.rsl.wustl.edu/mars/>

The screenshot shows the Mars Orbital Data Explorer (ODE) website. At the top, there is a navigation bar with a Mars image and the title "Mars Orbital Data Explorer" on the left, and "PDS Geosciences Node Washington University in St. Louis" on the right. Below the title is a horizontal menu with buttons for "Home", "Data Product Search", "Tools", "Data Set Browser", "Download", and "Help & Resources". The main content area starts with a "WELCOME TO THE MARS ORBITAL DATA EXPLORER" heading, followed by a paragraph explaining the ODE's purpose. Below this are several feature boxes: "Data Product Search" (with a magnifying glass icon), "Additional Tools" (with a wrench icon), "Data Set Browser" (with a folder icon), "Download Cart" (with a shopping cart icon), "What's New" (with a "THIS IS NEW!" badge), "Help & Resources" (with a question mark icon), "Available Data Sets" (with a grid icon), and "Lunar ODE" and "Mercury ODE" (with Mars planet icons).

Meridiani and ODE – 2

1) Select Data Product Search Tab

2) Open the Select One or More Desired Data Sets

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Home **Data Product Search** Tools Data Set Browser Download Help & Resources

DATA PRODUCT SEARCH Reset Form ?

Planetary science data stored in PDS is organized by [data products](#) and [data sets](#). A data set is a collection of related data products, usually products acquired by a particular instrument and processed in a certain way. The data set also includes all documentation and supporting materials needed to understand and use the data products. A data product is a set of measurements resulting from a science observation, usually products acquired by a particular instrument and processed in a certain way.

STEP 1. SELECT DATA SETS TO SEARCH (A SELECTION IS REQUIRED) ?

Select One or More Desired Data Sets (Show Options - 1 Parameter Set)

STEP 2. SET ADDITIONAL FILTERING PARAMETERS (OPTIONAL)

<input checked="" type="checkbox"/> Select a Product ID or filter by a partial Product ID	(Show Options - 0 Parameters Set)
<input checked="" type="checkbox"/> Find by Product Center Latitude / Longitude	(Show Options - 0 Parameters Set)
<input checked="" type="checkbox"/> Filter by Time Range	(Show Options - 0 Parameters Set)

STEP 3. PREVIEW SEARCH RESULTS SUMMARY (OPTIONAL)

STEP 4. SUBMIT QUERY

Display Product Thumbnails on search results page

Meridiani ODE – 3

1) Select CRISM Targeted TRDRS & DDRs (FRT, HRL, HRS), center swath only I/Fs & DDRs

2) Select CTX

3) Select HiRISE RDR and RDRV11

(HiRISE Version 1.1 RDRs include map projection information embedded in the JPEG 2000 files)

The screenshot shows the Mars Orbital Data Explorer (ODE) interface. The top navigation bar includes links for Home, Data Product Search, Tools, Data Set Browser, Download, and Help & Resources. The main content area is titled "DATA PRODUCT SEARCH" and includes a "Reset Form" button. Below this, there is a section for "STEP 1. SELECT DATA SETS TO SEARCH (A SELECTION IS REQUIRED)". The interface lists various data products, including CRISM, CTX, and HiRISE. The CRISM section is expanded, showing several product types. The product "Targeted TRDRs & DDRs (FRT, HRL, HRS), center swath only I/F & DDRs" is selected, indicated by a red circle and a red arrow pointing from the first instruction. The CTX section is also expanded, showing "EDR - Experimental Data Record" selected, indicated by a red circle and a red arrow pointing from the second instruction. The HiRISE section is expanded, showing "RDR - Reduced Data Record - Combined and Processed Images" and "RDRV11 - RDR with Embedded Map Projection" selected, indicated by red circles and red arrows pointing from the third instruction.

Meridiani ODE – 4

1) Scroll down and expand
“Find by Product Center
Latitude/Longitude”

2) Enter a location range:

- Enter -1.5 for Max Latitude
- Enter 353.5 for West Longitude
- Enter 355.5 for East Longitude
- Enter -4 for Min Latitude

NOTE: Currently ODE searches on centers so you need to provide a large enough search area to catch the products you want (future versions of ODE will support search on coverage).

3) Select

“View Results in Table”

12 - NASA Planetary Data Systems -

The screenshot displays the Mars Orbital Data Explorer (ODE) interface. At the top, it features the title "Mars Orbital Data Explorer" and "PDS Geosciences Node Washington University in St. Louis". Below the title are navigation buttons: Home, Data Product Search, Tools, Data Set Browser, Download, and Help & Resources. The main content area is divided into several steps:

- STEP 1. SELECT DATA SETS TO SEARCH (A SELECTION IS REQUIRED)**: Includes a button "Select One or More Desired Data Sets" and a link "(Show Options - 4 Parameters Set)".
- STEP 2. SET ADDITIONAL FILTERING PARAMETERS (OPTIONAL)**: Includes a button "Find by Product ID or filter by a partial Product ID" and a button "Find by Product Center Latitude / Longitude" (highlighted with a red circle). Below this, there are input fields for "Max Latitude (-90 to 90)" with the value "-1.5", "Western most Longitude (0 to 360)" with the value "353.5", "Eastern most Longitude (0 to 360)" with the value "355.5", and "Min Latitude (-90 to 90)" with the value "-4". A "Show Search Area on Map" button is also present. To the right of these fields is a map of Mars showing the "Selected Search Area" with a color-coded overlay. The map axes range from 180° to 180° longitude and 90° to -90° latitude.
- STEP 3. PREVIEW SEARCH RESULTS SUMMARY (OPTIONAL)**: Includes a button "Preview Search Results Summary".
- STEP 4. SUBMIT QUERY**: Includes buttons "View Results in Table" (highlighted with a red circle) and "View Results on Map".

At the bottom, there is a checkbox "Display Product Thumbnails on search results page".

Meridiani ODE – 5

- 1) List of products found
 - 102 Products found
 - 21 TRDRs
 - 22 DDRs
 - 16 CTX EDRs
 - 43 HiRISE RDR/RDRV11

- 2) (Optional): Explore products by selecting their product id

Mars Orbital Data Explorer

PDS Geosciences Node
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Home Data Product Search Tools Data Set Browser Download Help & Resources

SEARCH RESULTS Output Results View on Map Back To Search

Products Found: 102
 Display Product Thumbnails Update Cart

Instrument	Type	Product ID	Obs Time
MRO CRISM	DDR	FRT000028A1_07_DE164L_DDR1	2006-10-03T12:44:14.306
MRO CRISM	DDR	FRT000028A1_07_DE164S_DDR1	2006-10-03T12:44:14.306
MRO CRISM	TRDR	FRT000028A1_07_IF164L_TRR2	2006-10-03T12:44:14.302
MRO CRISM	TRDR	FRT000028A1_07_IF164S_TRR2	2006-10-03T12:44:14.302
MRO CRISM	DDR	FRT0000334D_07_DE165L_DDR1	2006-11-30T01:38:37.265
MRO CRISM	DDR	FRT0000334D_07_DE165S_DDR1	2006-11-30T01:38:37.062
MRO CRISM	TRDR	FRT0000334D_07_IF165L_TRR2	2006-11-30T01:38:37.261
MRO CRISM	TRDR	FRT0000334D_07_IF165S_TRR2	2006-11-30T01:38:37.058
MRO CRISM	DDR	FRT00007D6C_07_DE165L_DDR1	2007-09-23T00:22:45.014
MRO CRISM	DDR	FRT00007D6C_07_DE165S_DDR1	2007-09-23T00:22:45.014

Select a product on

MRO CTX	EDR	P16_007348_1768_X1_025005W	2008-02-20T00:38:57.527
MRO CTX	EDR	P21_009141_1780_X1_025005W	2008-07-08T18:28:08.393
MRO CTX	EDR	P21_009207_1768_X1_035005W	2008-07-13T21:53:39.148
MRO CTX	EDR	P22_009497_1768_X1_035005W	2008-08-05T12:14:44.123
MRO CTX	EDR	P22_009563_1769_X1_035005W	2008-08-10T15:40:34.108
MRO CTX	EDR	P22_009708_1769_X1_035005W	2008-08-21T22:50:55.055
MRO CTX	EDR	T01_000873_1780_X1_025005W	2006-10-03T12:44:15.774
MRO HIRISE	RDRV11	ESP_011765_1780_COLOR	2009-01-29T05:45:32.947
MRO HIRISE	RDRV11	ESP_011765_1780_RED	2009-01-29T05:45:32.948

Select a product on

Meridiani ODE – 6

- 1) OPTIONAL – Take a look at a product:
- 2) Features
 - 1) SISs
 - 2) Meta Data
 - 3) Label
 - 4) Browse Image
 - 5) Add to download Cart
 - 6) Derived Files
 - 7) Access to CRISM Web Site
 - 8) Product Files

FRT0000334D_07_IF165S_TRR2

[More About this Product Type \(help page\)](#)

[Data Product Software Interface Specification \(PDF\)](#)

[Archive Software Interface Specification Document \(PDF\)](#)

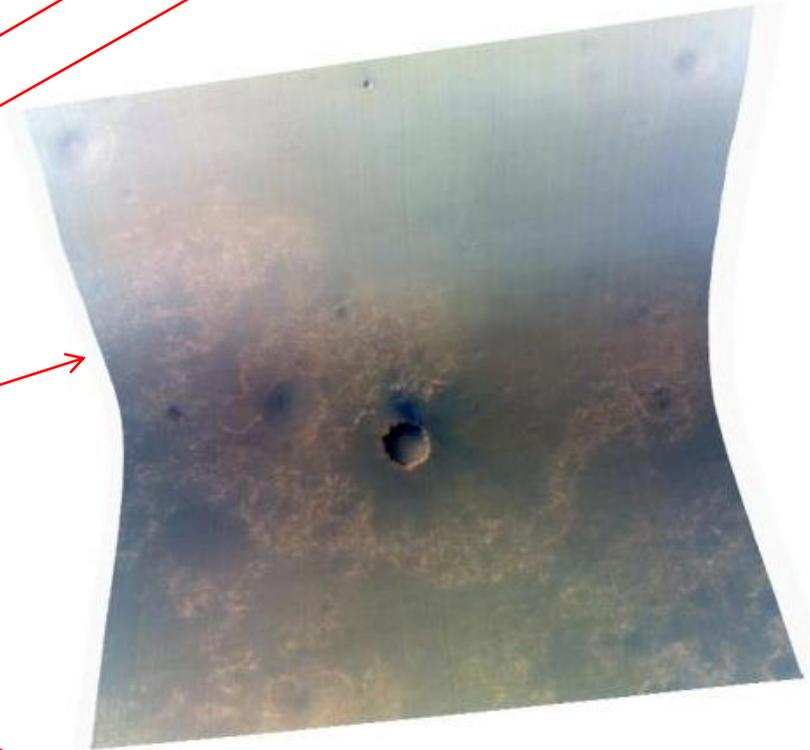
[Browse](#)

[Meta Data](#)

[Label](#)

[Related Products](#)

Browse Image - the image below is not the actual data product



[Add Product to Cart](#)

[Remove Product from Cart](#)

[Cart & Download Help](#)

CRISM Instrument Team Web Site

[FRT0000334D_07_IF165S_TRR2](#)

[PDS Product Files](#)

[Derived Files](#)

Product Files & Labels

KB

[firt0000334d_07_if165s_trr2.img](#)

Product Data File

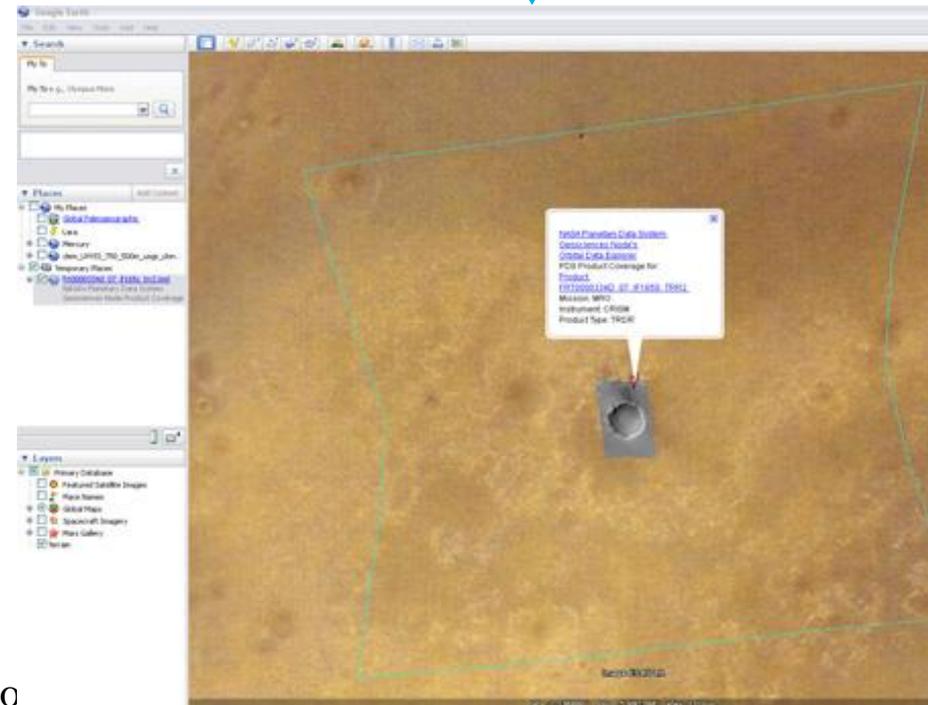
123,267

Meridiani ODE – 7

- 1) OPTIONAL – Derived files to Google Mars
- 2) Select the Derived Files Tab
- 3) Open Google Earth, Switch to Mars
- 4) Select the KML file

FRT0000334D_07_IF165S_TRR2	
PDS Product Files	Derived Files
Product Files & Labels	
	KB
frt0000334d_07_if165s_trr2.img	123,267
<i>Product Data File</i>	
frt0000334d_07_if165s_trr2.lbl	7
<i>Product Label File</i>	

FRT0000334D_07_IF165S_TRR2	
PDS Product Files	Derived Files
Derived Files	
	KB
frt0000334d_07_if165s_trr2.kml	3
<i>Product KML File</i> Help	
frt0000334d_07_if165s_trr2_cylproj.tif	



Meridiani ODE – 8

- 1) Let's refine the search
- 2) Select "View on Map"

Mars Orbital Data Explorer

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Home Data Product Search Tools Data Set Browser Download Help & Resources

SEARCH RESULTS Output Results View on Map Back To Search

Products Found: 102
 Display Product Thumbnails Update Cart

Instrument	Type	Product ID	Obs Time	
MRO CRISM	DDR	FRT000028A1_07_DE164L_DCR1	2006-10-03T12:44:14.306	<input type="checkbox"/>
MRO CRISM	DDR	FRT000028A1_07_DE164S_DCR1	2006-10-03T12:44:14.306	<input type="checkbox"/>
MRO CRISM	TRDR	FRT000028A1_07_IF164L_TRR2	2006-10-03T12:44:14.302	<input type="checkbox"/>
MRO CRISM	TRDR	FRT000028A1_07_IF164S_TRR2	2006-10-03T12:44:14.302	<input type="checkbox"/>
MRO CRISM	DDR	FRT0000334D_07_DE165L_DCR1	2006-11-30T01:38:37.265	<input type="checkbox"/>
MRO CRISM	DDR	FRT0000334D_07_DE165S_DCR1	2006-11-30T01:38:37.062	<input type="checkbox"/>
MRO CRISM	TRDR	FRT0000334D_07_IF165L_TRR2	2006-11-30T01:38:37.261	<input type="checkbox"/>
MRO CRISM	TRDR	FRT0000334D_07_IF165S_TRR2	2006-11-30T01:38:37.058	<input type="checkbox"/>
MRO CRISM	DDR	FRT00007D6C_07_DE165L_DCR1	2007-09-23T00:22:45.014	<input type="checkbox"/>
MRO CRISM	DDR	FRT00007D6C_07_DE165S_DCR1	2007-09-23T00:22:45.014	<input type="checkbox"/>

MRO CTX	EDR	P16_007348_1768_X1_025005W	2008-02-20T00:38:57.527	<input type="checkbox"/>
MRO CTX	EDR	P21_009141_1780_X1_025005W	2008-07-08T18:28:08.393	<input type="checkbox"/>
MRO CTX	EDR	P21_009207_1768_X1_035005W	2008-07-13T21:53:39.148	<input type="checkbox"/>
MRO CTX	EDR	P22_009497_1768_X1_035005W	2008-08-05T12:14:44.123	<input type="checkbox"/>
MRO CTX	EDR	P22_009563_1769_X1_035005W	2008-08-10T15:40:34.108	<input type="checkbox"/>
MRO CTX	EDR	P22_009708_1769_X1_035005W	2008-08-21T22:50:55.055	<input type="checkbox"/>
MRO CTX	EDR	T01_000873_1780_X1_025005W	2006-10-03T12:44:15.774	<input type="checkbox"/>
MRO HIRISE	RDRV11	ESP_011765_1780_COLOR	2009-01-29T05:45:32.947	<input type="checkbox"/>
MRO HIRISE	RDRV11	ESP_011765_1780_RED	2009-01-29T05:45:32.948	<input type="checkbox"/>

Meridiani ODE – 9

Mars Orbital Data Explorer
PDS Geosciences Node
Washington University in St. Louis

MAP SEARCH - Mars Cylindrical Projection
New Users Start Here...

Select Products By Area

Map Contents

- Product Query Results
- Product Query Lat/Lon Bounding Box
- Product Query Footprint
- Grid Lines

Data Set Files Selected

Product Types	Area-centric Located Products	Selected Products By Area
MRO CRISM DOR	22	0
MRO CRISM TROR	21	0
MRO CTX EDR	16	0
MRO HRIRSE RDR	23	0
MRO HRIRSE RDRV11	20	0

Map Tool Reference Panel

Name	Icon	Description
Zoom in		Click and drag a rectangle: Click and hold the left mouse button down on the map at one corner of the rectangle to zoom in to. Drag the mouse to the other corner of the rectangle, and release the mouse button. The map will zoom in to the area of the rectangle.
Zoom out		Click and drag a rectangle: the map will zoom out so that the current map area will fit into the rectangle drawn. The smaller the rectangle you draw, the more the map will zoom out.

- 1) Let's focus:
 - 1) Turn on Footprints
 - 2) Select zoom
 - 3) Click/Drag around area

Mars Orbital Data Explorer
PDS Geosciences Node
Washington University in St. Louis

MAP SEARCH - Mars Cylindrical Projection
New Users Start Here...

Select Products By Area

Map Contents

- Product Query Results
- Product Query Lat/Lon Bounding Box
- Product Query Footprint
- Grid Lines

Data Set Files Selected

Product Types	Area-centric Located Products	Selected Products By Area
MRO CRISM DOR	22	0
MRO CRISM TROR	21	0
MRO CTX EDR	16	0
MRO HRIRSE RDR	23	0
MRO HRIRSE RDRV11	20	0

Map Tool Reference Panel

Name	Icon	Description
Zoom in		Click and drag a rectangle: Click and hold the left mouse button down on the map at one corner of the rectangle to zoom in to. Drag the mouse to the other corner of the rectangle, and release the mouse button. The map will zoom in to the area of the rectangle.
Zoom out		Click and drag a rectangle: the map will zoom out so that the current map area will fit into the rectangle drawn. The smaller the rectangle you draw, the more the map will zoom out.

Meridiani ODE – 10

- 1) Select “Select Products By Area”
- 2) Click/Drag around landing site
- 3) Notice the list of selected products is reduced
- 4) Select “View in Table”

The screenshot shows the Mars Orbital Data Explorer (ODE) interface. The top navigation bar includes 'Home', 'Data Product Search', 'Tools', 'Data Set Browser', 'Download', and 'Help & Resources'. The main content area is titled 'MAP SEARCH - Mars Cylindrical Projection' and features a 'Select Products By Area' tool. A red circle highlights the 'View in Table' button in the 'Data Set Files Selected' panel. Below this panel is a table with the following data:

Product Types	Geocentric Located Products	Selected Products By Area
MRO CRISM DDR	22	10
MRO CRISM TRDR	21	10
MRO CTX EDR	16	6
MRO HIRISE RDR	23	11
MRO HIRISE RDRV11	20	4

The right side of the interface shows a map of Mars with a blue rectangular selection box around a landing site. Red arrows point from the list items to the corresponding map features and from the 'View in Table' button to the table.

Meridiani ODE – 11

1) Let's download these products

We want to add all to cart:

2) Select update cart box
(This will select all products on page)

3) Select Update Cart button

Mars Orbital Data Explorer
PDS Geosciences Node
Washington University in St. Louis

Home Data Product Search Tools Data Set Browser Download Help & Resources

SEARCH RESULTS
Output Results View on Map Back To Search

Products Found: 41
 Display Product Thumbnails

Instrument Type	Product ID	Obs Time	
MRO CRISM DDR	FRT000028A1_07_DE164L_DDR1	2006-10-03T12:44:14.306	<input type="checkbox"/>
MRO CRISM DDR	FRT000028A1_07_DE164S_DDR1	2006-10-03T12:44:14.306	<input type="checkbox"/>
MRO CRISM TRDR	FRT000028A1_07_IF164L_TRR2	2006-10-03T12:44:14.302	<input type="checkbox"/>
MRO CRISM TRDR	FRT000028A1_07_IF164S_TRR2	2006-10-03T12:44:14.302	<input type="checkbox"/>
MRO CRISM DDR	FRT0000334D_07_DE165L_DDR1	2006-11-30T01:38:37.265	<input type="checkbox"/>
MRO CRISM DDR	FRT0000334D_07_DE165S_DDR1	2006-11-30T01:38:37.062	<input type="checkbox"/>
MRO CRISM TRDR	FRT0000334D_07_IF165L_TRR2	2006-11-30T01:38:37.261	<input type="checkbox"/>
MRO CRISM TRDR	FRT0000334D_07_IF165S_TRR2	2006-11-30T01:38:37.058	<input type="checkbox"/>
MRO CRISM DDR	FRT00007D6C_07_DE165L_DDR1	2007-09-23T00:22:45.014	<input type="checkbox"/>
MRO CRISM DDR	FRT00007D6C_07_DE165S_DDR1	2007-09-23T00:22:45.014	<input type="checkbox"/>
MRO CRISM TRDR	FRT00007D6C_07_IF165L_TRR2	2007-09-23T00:22:45.014	<input type="checkbox"/>
MRO CRISM TRDR	FRT00007D6C_07_IF165S_TRR2	2007-09-23T00:22:45.014	<input type="checkbox"/>
MRO CRISM DDR	FRT000095B8_07_DE165L_DDR1	2008-01-11T23:36:19.749	<input type="checkbox"/>
MRO CRISM DDR	FRT000095B8_07_DE165S_DDR1	2008-01-11T23:36:19.749	<input type="checkbox"/>

Update Cart

Select a product on

Meridiani ODE – 12

Download all products in cart:

1) Select “Download” tab

2) Select “Create Mini-Archive”

This will include all archive documentation, catalog files, extras found in the product’s PDS Archive

3) Select “Continue”

Mars Orbital Data Explorer PDS Geosciences Node
Washington University in St. Louis

Home Data Product Search Tools Data Set Browser **Download** Help & Resources

SELECTED ITEMS FOR DOWNLOAD

PDS Data products are **freely available to the public**. The ODE download cart allows a user to select multiple products and individual files for convenient download. For most requests, the ODE system will acquire, compress, and place the requested files on an FTP server. The user will receive an email when the files are ready for download.
[More Product Download Information](#)

Confirm the products you have selected for download. After removing any unwanted products, click the continue button.

STEP 1. REVIEW PRODUCTS SELECTED FOR DOWNLOAD Empty the Cart

Products Selected for Download: 41
Size of current cart selections: 15.149 GB

[View Products Selected for Download](#) (Show Selection List - 41 Products)

STEP 2. DO YOU WISH TO ADD ADDITIONAL DATA SET FILES TO THE CART? - CREATE MINI-ARCHIVE

The Mini-Archive option will add all related files from the PDS Archive including: documentation, software, errata, extras, catalogs, indexes, and the browse images of any products selected for download.

Download Options:

<input checked="" type="checkbox"/> Selected Products (label, data product, and browse images)	Products Selected for Download: 41 Files from Product selections: 164 Size of current cart selections: 15.15 GB
<input type="checkbox"/> Selected Products' Derived Files (map projected, etc.)	Derived files: 164 Size of derived files: 0 MB
<input type="checkbox"/> Mini-Archive Files (related files from the PDS Archive including: documentation, software, errata, extras, catalogs, and indexes)	Files from Mini-Archive selections: 637 Size of Mini-Archive files: 975 MB

STEP 3. REVIEW SELECTIONS AND PROCEED TO CHECKOUT

With your selections, proceed with your selection of products and individual files, proceed by clicking the continue button.

Continue >

Meridiani ODE – 13

Finalize Download

1) Select Format: Zip, Tar, or Tar.Gs

2) Enter Email Address

3) Select “Submit Request”

ODE will gather the appropriate files, package and compress, then send you email with instructions on how to download compressed packages

Mars Orbital Data Explorer
PDS Geosciences Node
Washington University in St. Louis

Home Data Product Search Tools Data Set Browser Download Help & Resources

DOWNLOAD SETUP [Back](#)

Details for acquiring the selected data files:
1. The Geosciences Node will retrieve the files you have requested and place them in a user specific FTP folder for your download. After the completion and submission of this form, an automated system will prepare the FTP site for you to download the selected files from. You will receive an email when the files are ready for download. The email will include the FTP address and user name.

Select format: Zip Tar Tar.Gz

Terms and Conditions
PDS data products and data set files are freely available to the public.
[Policy for Citations of PDS Data click here for a new window](#)

Your email:
(You will be notified at this email address when the files are ready for download.)

Submit Request

bennett@wustl.edu,

The files that you have requested from the PDS Geosciences Node have been compressed and placed in a FTP folder for you.

Your requested files are located at the following FTP address:

<ftp://geoftp.wustl.edu/20090206T123548549>

Username: geoftp

Password: Odeuser1

The files will remain on the FTP site for 7 days. If you experience problems with our FTP site, contact

odewebmaster@wunder.wustl.edu

PDS Geosciences Node
Washington University in St. Louis

Contacts

- Keith Bennett – ODE Lead
 - bennett@wustl.edu
- Dan Scholes – ODE Web Master
 - odewebmaster@wunder.wustl.edu

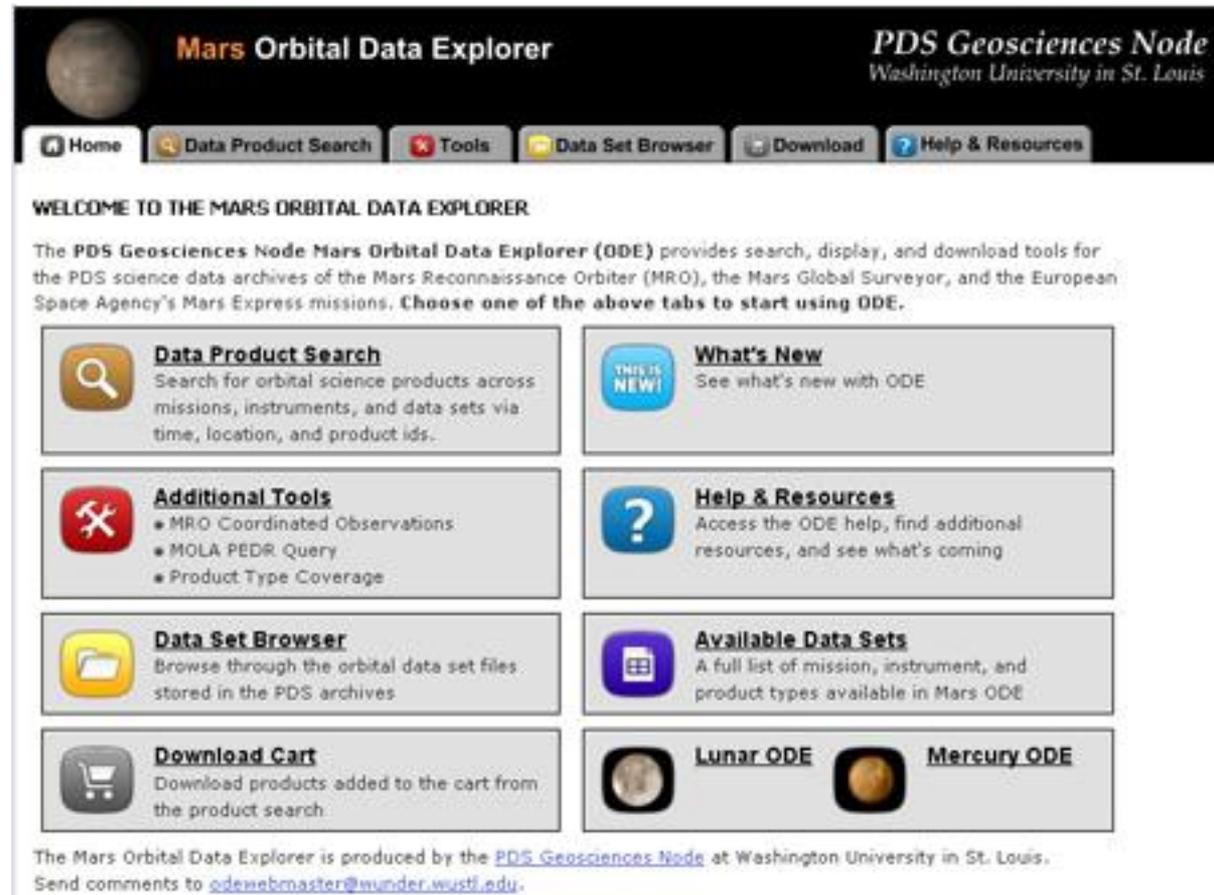
Backup Slides

Additional Scenarios

Nili Fossae and ODE - 1

Open ODE Mars:

<http://ode.rsl.wustl.edu/mars/>



The screenshot shows the Mars Orbital Data Explorer (ODE) website. At the top, there is a navigation bar with a Mars image and the title "Mars Orbital Data Explorer" and "PDS Geosciences Node Washington University in St. Louis". Below the navigation bar are several tabs: Home, Data Product Search, Tools, Data Set Browser, Download, and Help & Resources. The main content area is titled "WELCOME TO THE MARS ORBITAL DATA EXPLORER" and provides a brief description of the tool. Below this, there are several interactive boxes for different features: Data Product Search, What's New, Additional Tools, Help & Resources, Data Set Browser, Available Data Sets, Download Cart, Lunar ODE, and Mercury ODE. At the bottom, there is a footer with contact information and a link to the PDS Geosciences Node.

Mars Orbital Data Explorer
PDS Geosciences Node
Washington University in St. Louis

Home Data Product Search Tools Data Set Browser Download Help & Resources

WELCOME TO THE MARS ORBITAL DATA EXPLORER

The PDS Geosciences Node Mars Orbital Data Explorer (ODE) provides search, display, and download tools for the PDS science data archives of the Mars Reconnaissance Orbiter (MRO), the Mars Global Surveyor, and the European Space Agency's Mars Express missions. Choose one of the above tabs to start using ODE.

Data Product Search
Search for orbital science products across missions, instruments, and data sets via time, location, and product ids.

What's New
See what's new with ODE

Additional Tools
• MRO Coordinated Observations
• MOLA PEDR Query
• Product Type Coverage

Help & Resources
Access the ODE help, find additional resources, and see what's coming

Data Set Browser
Browse through the orbital data set files stored in the PDS archives

Available Data Sets
A full list of mission, instrument, and product types available in Mars ODE

Download Cart
Download products added to the cart from the product search.

Lunar ODE **Mercury ODE**

The Mars Orbital Data Explorer is produced by the [PDS Geosciences Node](#) at Washington University in St. Louis. Send comments to odewebmaster@wunder.wustl.edu.

Nili Fossae and ODE – 2

1) Select Data Product Search Tab

2) Open the Select One or More Desired Data Sets

Mars Orbital Data Explorer PDS Geosciences Node
Washington University in St. Louis

Home **Data Product Search** Tools Data Set Browser Download Help & Resources Reset Form ?

DATA PRODUCT SEARCH

Planetary science data stored in PDS is organized by [data products](#) and [data sets](#). A data set is a collection of related data products, usually products acquired by a particular instrument and processed in a certain way. The data set also includes all documentation and supporting materials needed to understand and use the data products. A data product is a set of measurements resulting from a science observation, usually products acquired by a particular instrument and processed in a certain way.

STEP 1. SELECT DATA SETS TO SEARCH (A SELECTION IS REQUIRED) ?

Select One or More Desired Data Sets (Show Options - 1 Parameter Set)

STEP 2. SET ADDITIONAL FILTERING PARAMETERS (OPTIONAL)

<input checked="" type="checkbox"/> Select a Product ID or filter by a partial Product ID	(Show Options - 0 Parameters Set)
<input checked="" type="checkbox"/> Find by Product Center Latitude / Longitude	(Show Options - 0 Parameters Set)
<input checked="" type="checkbox"/> Filter by Time Range	(Show Options - 0 Parameters Set)

STEP 3. PREVIEW SEARCH RESULTS SUMMARY (OPTIONAL)

STEP 4. SUBMIT QUERY

Display Product Thumbnails on search results page

Nili Fossae

ODE – 3

1) Select CRISM Targeted TRDRs & DDRs (FRT, HRL, HRS), center swath only I/Fs & DDRs

2) Select CTX

3) Select HiRISE RDR and RDRV11

(HiRISE Version 1.1 RDRs include map projection information embedded in the JPEG 2000 files)

The screenshot shows the Mars Orbital Data Explorer (ODE) interface. The top navigation bar includes links for Home, Data Product Search, Tools, Data Set Browser, Download, and Help & Resources. The main content area is titled "DATA PRODUCT SEARCH" and includes a "Reset Form" button. Below this, there is a section for "STEP 1. SELECT DATA SETS TO SEARCH (A SELECTION IS REQUIRED)". The interface lists various data products, including CRISM and CTX. The CRISM section is expanded, showing several product types. The product "Targeted TRDRs & DDRs (FRT, HRL, HRS), center swath only I/F & DDRs" is selected, indicated by a checked checkbox and a red circle. The CTX section is also expanded, showing "EDR - Experimental Data Record" and "RDRV11 - RDR with Embedded Map Projection" selected, both indicated by checked checkboxes and red circles. Red arrows point from the text on the left to these selected items in the interface.

Nili Fossae

ODE – 4

1) Scroll down and expand
“Find by Product Center
Latitude/Longitude”

2) Nili Fossae is at
approximately 21.1N, 75.4E

Enter a box around this spot:

- Enter 21.5 for Max Latitude
- Enter 74 for West Longitude
- Enter 74.5 for East Longitude
- Enter 21 for Min Latitude

NOTE: Currently ODE searches on centers so
you need to provide a large enough search area
to catch the products you want (future versions
of ODE will support search on coverage).

2) Select

“View Results in Table”

Mars Orbital Data Explorer
PDS Geosciences Node
Washington University in St. Louis

Home Data Product Search Tools Data Set Browser Download Help & Resources

DATA PRODUCT SEARCH [Reset Form](#)

Planetary science data stored in PDS is organized by [data products](#) and [data sets](#). A data set is a collection of related data products, usually products acquired by a particular instrument and processed in a certain way. The data set also includes all documentation and supporting materials needed to understand and use the data products. A data product is a set of measurements resulting from a science observation, usually products acquired by a particular instrument and processed in a certain way.

STEP 1. SELECT DATA SETS TO SEARCH (A SELECTION IS REQUIRED)

Select One or More Desired Data Sets (Show Options - 4 Parameters Set)

STEP 2. SET ADDITIONAL FILTERING PARAMETERS (OPTIONAL)

Select a Product ID or filter by a partial Product ID (Show Options - 0 Parameters Set)

Find by Product Center Latitude / Longitude (Hide Options - 4 Parameters Set)

Many data products provide geographic coordinates that are based on the product's center latitude and longitude.

Selected Search Area

Max Latitude (-90 to 90): 21.5

Western most Longitude (0 to 360): 74

Eastern most Longitude (0 to 360): 74.5

Min Latitude (-90 to 90): 21

Show Area On Map

STEP 3. PREVIEW SEARCH RESULTS SUMMARY (OPTIONAL)

[Preview Search Results Summary](#)

STEP 4. SUBMIT QUERY

View Results in Table **View Results on Map**

Display Product Thumbnails on search results page

Nili Fossae

ODE – 5

Mars Orbital Data Explorer

PDS Geo
Washington L

Home Data Product Search Tools Data Set Browser Download Help & R

SEARCH RESULTS [Output Results](#) [View on Map](#) [Back To Search](#)

Products Found: 28
 Display Product Thumbnails [Update Cart](#)

Instrument	Type	Product ID	Obs Time	
MRO CRISM	DOR	FRT00004F75_07_DE166L_DDR1	2007-03-24T22:02:57.361	<input type="checkbox"/>
MRO CRISM	DOR	FRT00004F75_07_DE166S_DDR1	2007-03-24T22:02:57.361	<input type="checkbox"/>
MRO CRISM	TRDR	FRT00004F75_07_IF166L_TRR2	2007-03-24T22:02:57.361	<input type="checkbox"/>
MRO CRISM	TRDR	FRT00004F75_07_IF166S_TRR2	2007-03-24T22:02:57.772	<input type="checkbox"/>
MRO CRISM	DOR	FRT00004D9_07_DE166L_DDR1	2007-06-21T06:44:06.228	<input type="checkbox"/>
MRO CRISM	DOR	FRT00004D9_07_DE166S_DDR1	2007-06-21T06:44:06.197	<input type="checkbox"/>
MRO CRISM	TRDR	FRT00004D9_07_IF166L_TRR2	2007-06-21T06:44:06.228	<input type="checkbox"/>
MRO CRISM	TRDR	FRT00004D9_07_IF166S_TRR2	2007-06-21T06:44:06.197	<input type="checkbox"/>
MRO CRISM	DOR	FRT000078C8_07_DE166L_DDR1	2007-09-17T15:27:35.410	<input type="checkbox"/>
MRO CRISM	DOR	FRT000078C8_07_DE166S_DDR1	2007-09-17T15:27:35.410	<input type="checkbox"/>

- 1) List of products found
 - 28 Products:
 - 10 TRDRs
 - 10 DDRs
 - 2 CTX EDRs
 - 6 HiRISE RDR/RDRV11s

2) (Optional): Explore products by selecting their product id

We want to add most to cart:

- 3) Select update cart box
(This will select all products on page)
- 4) Select Update Cart button
 - This will place all products in cart:

5) This is a lot of data. We really don't want all the HiRISE (one will do) so deselect the box next to the others.

- 6) Select Update Cart button
 - this will remove them from the cart

MRO CRISM	TRDR	FRT0000A4B5_07_DE167S_TRR2	2008-03-07T05:50:17.414	<input checked="" type="checkbox"/>	In Cart
MRO CTX	EDR	P11_005354_2016_XI_21N285W	2007-09-17T15:27:36.880	<input checked="" type="checkbox"/>	In Cart
MRO CTX	EDR	P17_007556_2012_XI_21N285W	2008-03-07T05:50:18.137	<input checked="" type="checkbox"/>	In Cart
MRO HIRISE	RDR	PSP_003086_2015_COLOR	2007-03-24T22:03:00.776	<input checked="" type="checkbox"/>	In Cart
MRO HIRISE	RDR	PSP_003086_2015_RED	2007-03-24T22:03:00.758	<input checked="" type="checkbox"/>	In Cart
MRO HIRISE	RDR	PSP_003587_2015_COLOR	2007-05-02T22:57:24.225	<input checked="" type="checkbox"/>	In Cart
MRO HIRISE	RDR	PSP_003587_2015_RED	2007-05-02T22:57:24.225	<input checked="" type="checkbox"/>	In Cart
MRO HIRISE	RDR	PSP_007556_2010_COLOR	2008-03-07T05:50:14.778	<input checked="" type="checkbox"/>	In Cart
MRO HIRISE	RDR	PSP_007556_2010_RED	2008-03-07T05:50:14.779	<input checked="" type="checkbox"/>	In Cart

Nili Fossae

ODE – 6

Download all products in cart:

1) Select “Download” tab

2) Select “Create Mini-Archive”

This will include all archive documentation, catalog files, extras found in the product’s PDS Archive

3) Select “Continue”

Mars Orbital Data Explorer PDS Geosciences Node
Washington University in St. Louis

Home Data Product Search Tools Data Set Browser Download Help Resources

SELECTED ITEMS FOR DOWNLOAD

PDS Data products are **freely available to the public**. The ODE download cart allows a user to select multiple products and individual files for convenient download. For most requests, the ODE system will acquire, compress, and place the requested files on an FTP server. The user will receive an email when the files are ready for download. [More Product Download Information](#)

Confirm the products you have selected for download. After removing any unwanted products, click the continue button.

STEP 1. REVIEW PRODUCTS SELECTED FOR DOWNLOAD Empty the Cart

Products Selected for Download: **65**
Size of current cart selections: **21.657 GB**

[View Products Selected for Download](#) (Show Selection List - 65 Products)

STEP 2. DO YOU WISH TO ADD ADDITIONAL DATA SET FILES TO THE CART? - CREATE MINI-ARCHIVE

The Mini-Archive option will add all related files from the PDS Archive including: documentation, software, errata, extras, catalogs, indexes, and the browse images of any products selected for download.

Download Options:

<input checked="" type="checkbox"/> Selected Products (label, data product, and browse images)	Products Selected for Download: 65 Files from Product selections: 234 Size of current cart selections: 21.66 GB
<input type="checkbox"/> Selected Products' Derived Files (map projected, etc.)	Derived files: 260 Size of derived files: 1 MB
<input checked="" type="checkbox"/> Mini-Archive Files (related files from the PDS Archive including: documentation, software, errata, extras, catalogs, and indexes)	Files from Mini-Archive selections: 855 Size of Mini-Archive files: 1.18 GB

Selection Total

Products Selected for Download: 65
Files from selections: 1089
Size of current cart selections: 22.84 GB
This cart selection should be available for download in approximately: 6.2 hours*
There are currently 19 download requests in the queue being processed.

* Your cart selections include externally hosted files, which may take the Geosciences Node longer to acquire and organize for your download.

If you require the files immediately: Expand the product list above, and check "Display Individual Files of the Products". Then click the individual product files to directly download them from the source.

STEP 3. REVIEW SELECTIONS AND PROCEED TO CHECKOUT

With your selections, proceed by clicking the continue button.

Continue >

Nili Fossae

ODE – 7

Finalize Download

1) Select Format: Zip, Tar, or Tar.Gs

2) Enter Email Address

3) Select “Submit Request”

ODE will gather the appropriate files, package and compress, then send you email with instructions on how to download compressed packages

Mars Orbital Data Explorer
PDS Geosciences Node
Washington University in St. Louis

Home Data Product Search Tools Data Set Browser Download Help & Resources

DOWNLOAD SETUP [Back](#)

Details for acquiring the selected data files:
1. The Geosciences Node will retrieve the files you have requested and place them in a user specific FTP folder for your download. After the completion and submission of this form, an automated system will prepare the FTP site for you to download the selected files from. You will receive an email when the files are ready for download. The email will include the FTP address and user name.

Select format: Zip Tar Tar.Gz

Terms and Conditions
PDS data products and data set files are freely available to the public.
[Policy for Citations of PDS Data click here for a new window](#)

Your email:

(You will be notified at this email address when the files are ready for download.)

Submit Request

bennett@wustl.edu,

The files that you have requested from the PDS Geosciences Node have been compressed and placed in a FTP folder for you.

Your requested files are located at the following FTP address:

<ftp://geoftp.wustl.edu/20090206T123548549>

Username: geoftp

Password: Odeuser1

The files will remain on the FTP site for 7 days. If you experience problems with our FTP site, contact

odewebmaster@wunder.wustl.edu

PDS Geosciences Node
Washington University in St. Louis

MER-A Spirit Gusev Crater Site

- Use ODE to acquire science data products
- Gusev Crater Location: -14.6N, 175.4E

Gusev Crater and ODE - 1

Open ODE Mars:

<http://ode.rsl.wustl.edu/mars/>

The screenshot shows the Mars Orbital Data Explorer (ODE) website. At the top, there is a navigation bar with a Mars image and the title "Mars Orbital Data Explorer" on the left, and "PDS Geosciences Node" and "Washington University in St. Louis" on the right. Below the navigation bar are several tabs: Home, Data Product Search, Tools, Data Set Browser, Download, and Help & Resources. The main content area starts with a welcome message: "WELCOME TO THE MARS ORBITAL DATA EXPLORER". This is followed by a paragraph explaining that the ODE provides search, display, and download tools for PDS science data archives from the Mars Reconnaissance Orbiter (MRO), the Mars Global Surveyor, and the European Space Agency's Mars Express missions. Below this are several interactive boxes: "Data Product Search" (with a magnifying glass icon), "Additional Tools" (with a wrench icon), "Data Set Browser" (with a folder icon), "Download Cart" (with a shopping cart icon), "What's New" (with a "THIS IS NEW!" badge), "Help & Resources" (with a question mark icon), "Available Data Sets" (with a grid icon), and "Lunar ODE" and "Mercury ODE" (with Mars planet icons). At the bottom, there is a footer note stating the ODE is produced by the PDS Geosciences Node at Washington University in St. Louis, with contact information for the webmaster.

Mars Orbital Data Explorer PDS Geosciences Node
Washington University in St. Louis

Home Data Product Search Tools Data Set Browser Download Help & Resources

WELCOME TO THE MARS ORBITAL DATA EXPLORER

The PDS Geosciences Node Mars Orbital Data Explorer (ODE) provides search, display, and download tools for the PDS science data archives of the Mars Reconnaissance Orbiter (MRO), the Mars Global Surveyor, and the European Space Agency's Mars Express missions. Choose one of the above tabs to start using ODE.

Data Product Search
Search for orbital science products across missions, instruments, and data sets via time, location, and product ids.

Additional Tools

- MRO Coordinated Observations
- MOLA PEDR Query
- Product Type Coverage

Data Set Browser
Browse through the orbital data set files stored in the PDS archives

Download Cart
Download products added to the cart from the product search.

What's New
See what's new with ODE

Help & Resources
Access the ODE help, find additional resources, and see what's coming

Available Data Sets
A full list of mission, instrument, and product types available in Mars ODE

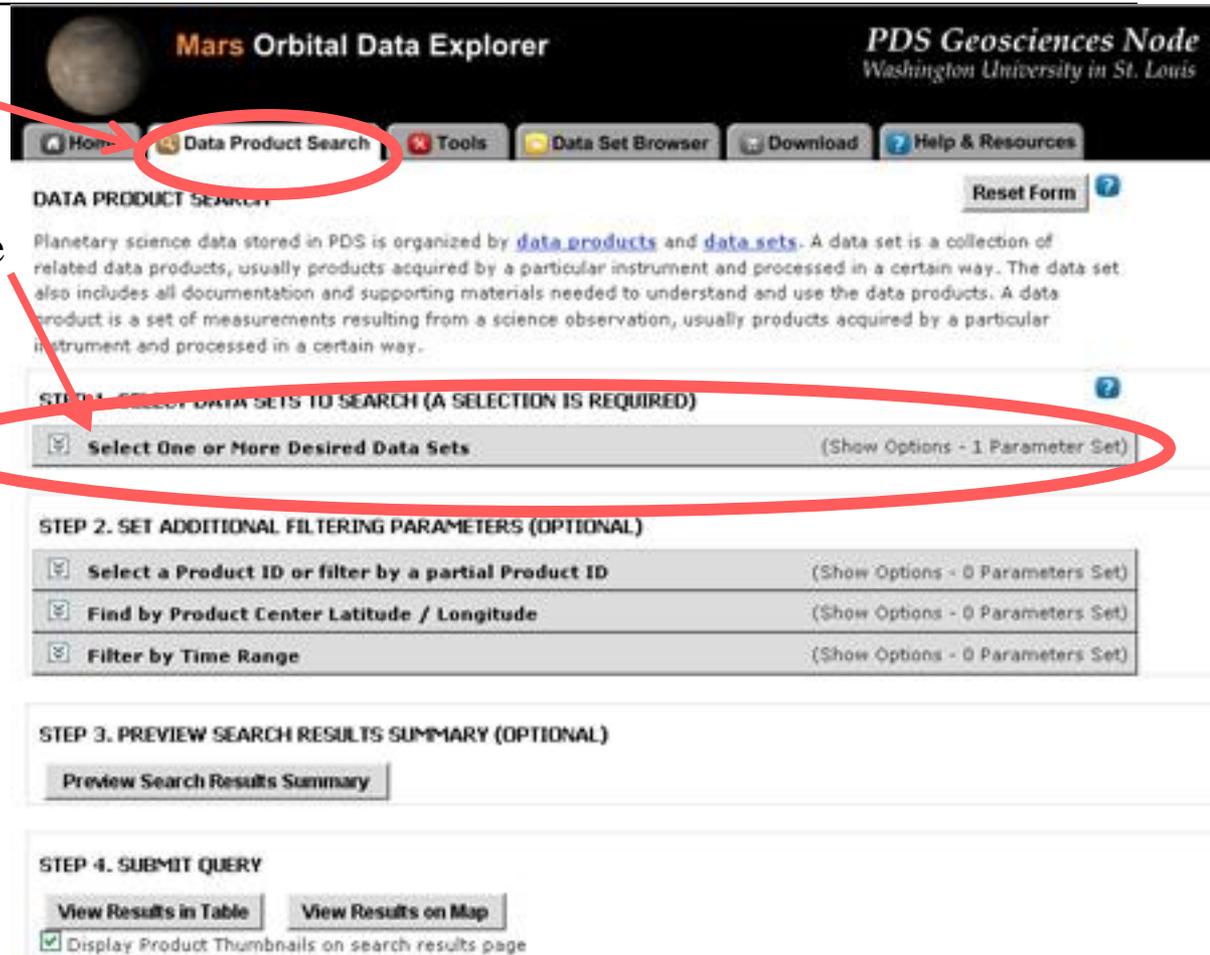
Lunar ODE **Mercury ODE**

The Mars Orbital Data Explorer is produced by the [PDS Geosciences Node](#) at Washington University in St. Louis. Send comments to odewebmaster@wunder.wustl.edu.

Gusev Crater and ODE – 2

1) Select Data Product Search Tab

2) Open the Select One or More Desired Data Sets



Mars Orbital Data Explorer PDS Geosciences Node
Washington University in St. Louis

Home **Data Product Search** Tools Data Set Browser Download Help & Resources

DATA PRODUCT SEARCH Reset Form

Planetary science data stored in PDS is organized by [data products](#) and [data sets](#). A data set is a collection of related data products, usually products acquired by a particular instrument and processed in a certain way. The data set also includes all documentation and supporting materials needed to understand and use the data products. A data product is a set of measurements resulting from a science observation, usually products acquired by a particular instrument and processed in a certain way.

STEP 1. SELECT DATA SETS TO SEARCH (A SELECTION IS REQUIRED)

Select One or More Desired Data Sets (Show Options - 1 Parameter Set)

STEP 2. SET ADDITIONAL FILTERING PARAMETERS (OPTIONAL)

Select a Product ID or filter by a partial Product ID (Show Options - 0 Parameters Set)

Find by Product Center Latitude / Longitude (Show Options - 0 Parameters Set)

Filter by Time Range (Show Options - 0 Parameters Set)

STEP 3. PREVIEW SEARCH RESULTS SUMMARY (OPTIONAL)

STEP 4. SUBMIT QUERY

Display Product Thumbnails on search results page

Gusev Crater

ODE – 3

1) Select CRISM Targeted TRDRS & DDRs (FRT, HRL, HRS), center swath only I/Fs & DDRs

2) Select CTX

3) Select HiRISE RDR and RDRV11

(HiRISE Version 1.1 RDRs include map projection information embedded in the JPEG 2000 files)

The screenshot shows the Mars Orbital Data Explorer (ODE) interface. The top navigation bar includes links for Home, Data Product Search, Tools, Data Set Browser, Download, and Help & Resources. The main content area is titled "DATA PRODUCT SEARCH" and includes a "Reset Form" button. Below this, there is a section for "STEP 1. SELECT DATA SETS TO SEARCH (A SELECTION IS REQUIRED)". The interface lists various data products, including CRISM and CTX. The CRISM section is expanded, showing several product types. The product "Targeted TRDRs & DDRs (FRT, HRL, HRS), center swath only I/F & DDRs" is selected and circled in red. The CTX section is also expanded, showing several product types. The products "EDR - Experimental Data Record" and "RDRV11 - RDR with Embedded Map Projection" are selected and circled in red. Red arrows point from the text on the left to these selected products in the screenshot.

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STEP 1. SELECT DATA SETS TO SEARCH (A SELECTION IS REQUIRED)

Select One or More Desired Data Sets (Hide Options - 5 Parameters Set)

Map location data is available for these products.
 Observation time data is available for these products.

Mars Reconnaissance Orbiter

CRISM - Compact Reconnaissance Imaging Spectrometer for Mars **Other Product Types**

[CRISM Product Primer](#)

TRDR & DDR - Targeted Reduced Data Record & associated Derived Data Record

- Targeted TRDRs & DDRs (FRT, HRL, HRS) [Data Set Description](#)
- Targeted TRDRs & DDRs (FRT, HRL, HRS), center swath only I/F & DDRs [Data Set Description](#)
- Multispectral TRDRs & DDRs (MSP, MSW) [Data Set Description](#)
- EPF and TOD TRDRs & DDRs [Data Set Description](#)
- All TRDRs & DDRs [Data Set Description](#)
- MRDR - Multispectral Reduced Data Record [Data Set Description](#)

CTX - Context Camera

- EDR - Experimental Data Record [Data Set Description](#)
- ANAGLY - Anaglyph Image [Data Set Description](#)
- RDR - Reduced Data Record - Combined and Processed Images [Data Set Description](#)
- RDRV11 - RDR with Embedded Map Projection [Data Set Description](#)

MCS - Mars Climate Sounder **Other Product Types**

- RDR - Reduced Data Record [Data Set Description](#)

Gusev Crater

ODE – 4

1) Scroll down and expand “Find by Product Center Latitude/Longitude”

2) Gusev Crater is at approximately 14.6S, 175.4E

Enter a box around this spot:

- Enter -14.5 for Max Latitude
- Enter 175.2 for West Longitude
- Enter 175.6 for East Longitude
- Enter -14.7 for Min Latitude

NOTE: Currently ODE searches on centers so you need to provide a large enough search area to catch the products you want (future versions of ODE will support search on coverage).

2) Select

“View Results in Table”

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STEP 1. SELECT DATA SETS TO SEARCH (A SELECTION IS REQUIRED)

Select One or More Desired Data Sets (Show Options - 4 Parameters Set)

STEP 2. SET ADDITIONAL FILTERING PARAMETERS (OPTIONAL)

Select a Product ID or filter by a partial Product ID (Show Options - 0 Parameters Set)

Find by Product Center Latitude / Longitude (Hide Options - 4 Parameters Set)

Mars Orbital Data Explorer

Selected Search Area

Max Latitude (-90 to 90)

Western most Longitude (0 to 360) Eastern most Longitude (0 to 360)

Min Latitude (-90 to 90) Show Search Area Map

Filter by Time Range (Show Options - 0 Parameters Set)

STEP 3. PREVIEW SEARCH RESULTS SUMMARY (OPTIONAL)

Preview Search Results Summary

STEP 4. SUBMIT QUERY

Display Product Thumbnails on search results page

View Results in Table View Results on Map

Gusev Crater

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- 1) List of products found
 - 76 Products:
 - 16 TRDRs
 - 18 DDRs
 - 12 CTX
 - 30 HiRISE RDR/RDRV11

- 2) (Optional): Explore products by selecting their product id

Select just the products you want

- 3) Click the box next to the product

- 4) Click the “Update Cart” button to add the selected products

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SEARCH RESULTS

Output Results View on Map Back To Search

Products Found: 76

Display Product Thumbnails

Update Cart

Instrument	Type	Product ID	Obs Time	
MRO CRISM	DDR	FRT00003192_07_DE165L_DDR1	2006-11-22T08:35:31.242	<input type="checkbox"/>
MRO CRISM	DDR	FRT00003192_07_DE165S_DDR1	2006-11-22T08:35:31.471	<input type="checkbox"/>
MRO CRISM	TRDR	FRT00003192_07_IF165L_TRR2	2006-11-22T08:35:31.239	<input type="checkbox"/>
MRO CRISM	TRDR	FRT00003192_07_IF165S_TRR2	2006-11-22T08:35:31.471	<input type="checkbox"/>
MRO CRISM	DDR	FRT0000335D0_07_DE164L_DDR1	2006-11-22T21:53:24.307	<input type="checkbox"/>
MRO CTX	EDR	P11_005456_1652_XI_14S184W	2007-09-25T14:01:48.649	<input type="checkbox"/>
MRO CTX	EDR	P12_005601_1653_XI_14S184W	2007-10-06T21:12:18.977	<input type="checkbox"/>
MRO CTX	EDR	P14_006524_1654_XN_14S184W	2007-12-17T19:25:40.374	<input type="checkbox"/>
MRO CTX	EDR	P15_006735_1653_XI_14S184W	2008-01-03T06:03:56.876	<input type="checkbox"/>
MRO CTX	EDR	P20_008818_1653_XI_14S184W	2008-06-13T14:16:08.353	<input type="checkbox"/>
MRO CTX	EDR	P22_009530_1653_XI_14S184W	2008-06-08T01:54:08.344	<input type="checkbox"/>
MRO HIRISE	RDR	PSP_001513_1655_COLOR	2006-11-22T08:35:28.091	<input type="checkbox"/>
MRO HIRISE	RDR	PSP_001513_1655_RED	2006-11-22T08:35:28.062	<input type="checkbox"/>

Gusev Crater

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Download all products in cart:

1) Select “Download” tab

2) Select “Create Mini-Archive”

This will include all documentation, etc with products

3) Select “Continue”

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SELECTED ITEMS FOR DOWNLOAD

PDS Data products are **freely available to the public**. The ODE download cart allows a user to select multiple products and individual files for convenient download. For most requests, the ODE system will acquire, compress, and place the requested files on an FTP server. The user will receive an email when the files are ready for download. [More Product Download Information](#)

Confirm the products you have selected for download. After removing any unwanted products, click the continue button.

STEP 1. REVIEW PRODUCTS SELECTED FOR DOWNLOAD Empty the Cart

Products Selected for Download: 7
Size of current cart selections: 1.874 GB

[View Products Selected for Download](#) (Show Selection List - 7 Products)

STEP 2. DO YOU WISH TO ADD ADDITIONAL DATA SET FILES TO THE CART? - CREATE MINI-ARCHIVE

The Mini-Archive option will add all related files from the PDS Archive including: documentation, software, errata, extras, catalogs, indexes, and the browse images of any products selected for download.

Download Options:	
<input checked="" type="checkbox"/> Selected Products (label, data product, and browse images)	Products Selected for Download: 7 Files from Product selections: 28 Size of current cart selections: 1.87 GB
<input type="checkbox"/> Selected Products' Derived Files (map projected, etc.)	Derived files: 28 Size of derived files: 0 MB
<input checked="" type="checkbox"/> Mini-Archive Files (related files from the PDS Archive including: documentation, software, errata, extras, catalogs, and indexes)	Files from Mini-Archive selections: 255 Size of Mini-Archive files: 636 MB
Selection Total	Products Selected for Download: 7 Files from selections: 283 Size of current cart selections: 2.51 GB This cart selection should be available for download in approximately: 2.2 hours* There are currently 18 downloaded requests in the

STEP 3. REVIEW SELECTIONS AND PROCEED TO CHECKOUT

When you are content with your selection of products and individual files, proceed by clicking the continue button.

Continue >

Gusev Crater

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DOWNLOAD SETUP < Back ?

Details for acquiring the selected data files:
1. The Geosciences Node will retrieve the files you have requested and place them in a user specific FTP folder for your download. After the completion and submission of this form, an automated system will prepare the FTP site for you to download the selected files from. You will receive an email when the files are ready for download. The email will include the FTP address and user name.

Select format: Zip Tar Tar.Gz

Terms and Conditions
PDS data products and data set files are freely available to the public.
[Policy for Citations of PDS Data click here for a new window](#)

Your email:
(You will be notified at this email address when the files are ready for download.)

Submit Request

Finalize Download

1) Select Format: Zip, Tar, or Tar.Gs

2) Enter Email Address

3) Select “Submit Request”

ODE will gather the appropriate files, package and compress, then send you email with instructions on how to download compressed packages

bennett@wustl.edu,

The files that you have requested from the PDS Geosciences Node have been compressed and placed in a FTP folder for you.

Your requested files are located at the following FTP address:

<ftp://geoftp.wustl.edu/20090206T123548549>

Username: geoftp

Password: Odeuser1

The files will remain on the FTP site for 7 days. If you experience problems with our FTP site, contact

odewebmaster@wunder.wustl.edu

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